

IN THE CLAIMS:

What is claimed is:

1. An optical code reader comprising:

a chassis;

5 an imaging optics assembly pivotally mounted on the chassis; and

means for focusing the imaging optics assembly on a target image, wherein the focus is adjusted by pivoting the imaging optics assembly.

2. The optical code reader according to Claim 1, further comprising an illumination

10 device for illuminating the target image.

3. The optical code reader according to Claim 1, further comprising an aiming

device for assisting a user in aiming the optical code reader on the target image.

15 4. The optical code reader according to Claim 3, wherein the aiming device

comprises a visual laser diode and a diffractive optical element lens assembly.

5. The optical code reader according to Claim 1, further comprising a printed circuit

board assembly for bi-directional transmission of signals of at least one of a plurality of input

20 signals and a plurality of output signals.

6. The optical code reader according to Claim 1, further comprising a motor assembly for focusing the imaging optics assembly on the target image.

7. The optical code reader according to Claim 6, wherein the motor assembly
5 comprises a magnet, a coil assembly for applying an electromagnetic force on the magnet, an opto-mechanical barrel assembly for housing the imaging optics assembly and a pivot pin for rotatably connecting the opto-mechanical barrel assembly to the chassis.

8. The optical code reader according to Claim 7, wherein at least one power signal is
10 transmitted to the coil assembly such that the coil assembly applies an electromagnetic force on the magnet, wherein the magnet is connected to the opto-mechanical barrel assembly thereby causing the opto-mechanical barrel assembly to pivot about the pivot pin to adjust the focus of the optical code reader.

15 9. The optical code reader according to Claim 1, wherein the imaging optics assembly comprises a lens holder, a first lens positioned within the lens holder adjacent a circumferential shoulder formed on an inner surface of the lens holder, a second lens and an aperture positioned within the lens holder adjacent the first lens, a third lens positioned within the lens holder, and a retaining element for retaining the first, second and third lenses and the
20 aperture within the lens holder.

10. The optical code reader according to Claim 1, wherein the chassis is formed of zinc.

11. The optical code reader according to Claim 1, wherein the imaging optics
5 assembly is pivoted approximately one degree.

12. The optical code reader according to Claim 11, wherein the pivot of
approximately one degree results in an adjustment approximately equivalent to an 85 micron
linear adjustment.

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13. The optical code reader according to Claim 12, wherein the adjustment is
completed in less than 20 milliseconds.

14. A method for adjusting the focus of an imaging optics assembly, the method
15 comprising the steps of:
providing an imaging optics assembly pivotally mounted on a chassis; and
pivoting the imaging optics assembly to focus the imaging optics assembly on a target
image.

20 15. The method according to Claim 14, further comprising the step of illuminating the
target image.

16. The method according to Claim 14, further comprising the step of aiming the imaging optics assembly on the target image.

17. The method according to Claim 14, wherein the aiming device comprises a visual
5 laser diode and a diffractive optical element lens assembly.

18. An optical code reader comprising:
a chassis;
an opto-mechanical barrel assembly for housing an imaging optics assembly, wherein the
10 opto-mechanical barrel assembly is pivotally mounted on the chassis such that pivotal movement
of the opto-mechanical barrel assembly adjusts the focus of the imaging optics assembly on a
target image.

19. The optical code reader according to Claim 18, further comprising an
15 electromagnetic motor assembly for causing pivotal movement of the imaging optics assembly to
adjust the focus on the target image.

20. The optical code reader according to Claim 19, wherein the electromagnetic motor
assembly comprises a magnet mounted on the opto-mechanical barrel assembly, a coil assembly
20 for applying an electromagnetic force on the magnet, and a pivot pin for pivotally mounting the
opto-mechanical barrel assembly on the chassis.